

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of processing a substrate comprising:

growing a first ultra-thin oxide layer of approximately 5Å-10Å on a surface of the substrate to consume defects in a surface region of the substrate;

etching away ~~at least a portion of~~ the first ultra-thin oxide layer to remove at least some of said consumed defects from the substrate and reveal a subsurface of said substrate;

growing a second ultra-thin oxide layer of approximately 5Å-10Å on said subsurface of said substrate to consume more defects in said surface region of the substrate;

etching away ~~at least a portion of~~ the second ultra-thin oxide layer to remove at least some of said consumed more defects from the substrate;

monitoring said surface region of the substrate; and

repeatedly growing an additional ultra-thin oxide layer of approximately 5Å-10Å to consume additional defects and etching the additional oxide layer to remove the consumed additional defects to provide a substantially contain free substrate surface based on said monitoring of said surface region wherein at least one of the etching steps comprises a plasma etch process.

Claim 2 (Currently Amended): The method of Claim 1, wherein said growing first and second ultra-thin oxide layers each comprise growing an oxide layer having a thickness of between approximately 5Å ~~and approximately 15 Å~~.

Claim 3 (Cancelled).

Claim 4 (Previously Presented): The method of Claim 1, wherein said monitoring comprises using high-resolution transmission electron microscopy (HRTEM) data.

Claim 5 (Original): The method of Claim 1, wherein the substrate comprises silicon.

Claim 6 (Original): The method of Claim 1, wherein the substrate comprises at least one of silicon and a silicon alloy.

Claim 7 (Original): The method of Claim 1, further comprising forming an additional layer on one of said first and second oxide layer using at least one of a thin film deposition process, an oxidation process, and an implantation process.

Claim 8 (Original): The method of Claim 1, wherein at least one of said etching steps comprises a dry vapor etch process.

Claim 9 (Canceled).

Claim 10 (Original): The method of Claim 1, wherein at least one of said etching steps comprises using a gas including at least one of a hydrogen containing gas, a fluorine containing gas, and a chlorine containing gas.

Claim 11 (Original): The method of Claim 10, wherein said using a gas comprises using a gas comprising at least one of HF, H₂, F₂, and C₁F₃.

Claim 12 (Original): The method of Claim 1, further comprising processing a plurality of substrates including said substrate, wherein each of said growing steps and each of said etching steps is performed on each of said plurality of substrates.

Claim 13-16 (Cancelled).

Claim 17 (Previously Presented): The method according to Claim 1, wherein said monitoring includes the imaging of a surface of the substrate after removal of one of said ultra-thin oxide layers.

Claim 18 (Previously Presented): The method according to Claim 5, wherein said monitoring includes the imaging of a silicon lattice at a surface of the substrate after removal of one of said ultra-thin oxide layers.

Claim 19 (Previously Presented): The method of Claim 17, wherein said imaging comprises using high-resolution transmission electron microscopy (HRTEM) data.

Claim 20 (Previously Presented): The method of Claim 18, wherein said imaging comprises using high-resolution transmission electron microscopy (HRTEM) data.

Claim 21 (Currently Amended): The method of Claim 1, wherein said substrate comprises $\text{Si}(x)\text{Ge}(y)$ silicon germanium.

Claim 22 (Previously Presented): The method of Claim 21, wherein at least one of said growing steps comprises a plasma assisted process.

Claim 23 (Previously Presented): The method of Claim 22, wherein each of said growing and etching steps comprises a plasma assisted process.